Dermatologic Emergencies

COURSE 393

PROF. MARWAN AL KHAWAJAH

COLLEGE OF MEDICINE

KING SAUD UNIVERSITY.
Definition

Emergency is ---
Acute
Unexpected
Dangerous
Requires quick action.
Alarming Morphological patterns.

Urticaria / Angioderma
Purpura / Echymosis
Bullae / Sloughing
Necrosis / Gangrene
Exfoliative Erythroderma Syndrome
Generalized/ widespread rashes in the acutely ill febrile patient
Urticaria / Angioedema

Transient swellings and erythema due to vasodilatation and fluid exudation. Manifest by weals that develop rapidly and clear within hours.

Can be life threatening esp. when associated with angioedema of the larynx.

May take years to resolve.
Purpura

Bleeding into the skin (petechiae, purpura, Echymoses)

Caused by pathology:

I - Inside blood vessel (disorders of coagulation)
II - Of blood vessel walls (Vasculitides)
III – Outside blood vessels (affecting supporting stroma eg: aging, drugs, Vit C deficiency, amyloidosis)
Bullous Diseases

Blisters are circumscribed fluid filled skin lesions.

Burns, bullous impetigo, herpes simplex and zoster, severe contact dermatitis and insect bites are common examples.

Skin diseases presenting mainly with blisters are relatively rare but may be fatal eg: autoimmune and mechanobullous diseases.
Erythema Multiforme (EM) – Stevens Johnson Syndrome (SJS) – Toxic Epidermal Necrolysis (TEN) Spectrum

EM is a cutaneous reaction pattern to several provoking stimuli including herpes simplex, bacterial infection and drugs. May be idiopathic.
The target (iris-like) lesions involve the hands and feet and less frequently the elbows and knees. There is now consensus that SJS and TEN are different from EM.
• SJS and TEN are severe variants of an identical pathologic process (apoptosis of keratinocytes induced by a cell-mediated cytotoxic reaction: Haptens vs. Cytokines) and differ only in the percentage of body surface involved.
• Both can start with macular and EM-like lesions; however about 50% of TEN evolve from diffuse erythema to necrosis and epidermal detachment.
• Rare and life threatening.
• Most common in adults more than 40 years
• Male = Female
• Risk factors: SLE, HIV, HLA –B12
• Polyetiologic: Drugs (sulfas, anticonvulsants, allopurinol, NSAIDS, antibiotics), infections, immunization, chemicals and idiopathic.
• Usually start with prodromes: fever, malaise, arthralgias 1-3 weeks after drug exposure and 1-3 days before mucocutaneous lesions. There may be tenderness, itching, burning, pain or paraesthesia, photophobia, painful micturition, impaired alimentation and anxiety.
• Rash starts on face and extremities, may generalize rapidly (few hours/days).

• Scalp, palms, and soles may be spared

• Mucous membranes invariably involved, 85% have conjunctival lesions.
• Evolve later to:
  - Confluent erythematous macules with crinkled surface
  - Raised flaccid blisters
  - Sheet like loss of epidermis
  - Red, oozing dermis resembling second-degree burn
• Histopathology: Full thickness necrosis of the epidermis and a sparse lymphocytic infiltrate.
• Recovery begins within days, completed in 3 weeks.
• Pressure points and periorificial sites take longer
• Nails and eyelashes may be shed.
• **Systemic Involvement:**

Respiratory, GIT, Renal, CV, Anaemia, Lymphopenia, Neutropenia, Eosinophilia
• **Sequelae:**

Scarring, dyspigmentation, eruptive melanocytic nevi, abnormal nails, phimosis, vaginal synechiae, entropion, trichiasis, sicca syndrome, keratitis and corneal scarring, neovascularization, synblepharon, persistent photophobia, blindness.
Mortality:

- 30% for TEN
- 5 -10% for SJS
- Due to sepsis, GI hemorrhage and fluid/electrolyte imbalance.
- Re exposure more rapid recurrence and more severe.
Differential dx:

Exanthematous drug eruption, phototoxic eruptions, GVHD, Toxic shock syndrome, burns, SSSS, generalized bullous fixed drug eruption, exfoliative dermatitis.
• **Management:**
  - Withdrawal of suspected drug(s)
  - in ICU or burn unit
  - IV fluids and electrolytes as for a third degree burn.
  - Symptomatic treatment
  - IV glucocorticoids/ immunoglobulins/ pentoxifylline
  - Treat eye lesions early (refer to ophth)
  - No surgical debridement
Bad prognostic factors

Body surface area > 10%
Serum Urea > 10mM
Age > 40 years
Heart rate > 120
Serum glucose > 14mM
Serum Bicarbonate < 20mM
Malignancy
EXFOLIATIVE ERYTHRODERMA SYNDROME (EES)

EES is a serious, at times life-threatening reaction pattern of the skin characterized by:

- generalized and uniform redness
- scaling (branny/ lamellar)
- fever, malaise, shivers, pruritis, fatigue anorexia and generalized lymphadenopathy
- loss of scalp and body hair, nail thickening and onycholysis
• Usually > 50 years
• Male > Female
• In children results from atopic dermatitis or PRP
• **Etiology:**
  - Pre existing dermatosis (psoriasis, eczema, id rxn, PRP, Pf) 50%
  - Drugs (eg. Allopurinol, CCB, carbamazepine, cimetidine, gold, lithium, quinidine) 15%
  - Lymphoma, Leukemia 10%
  - Undetermined (history/histology) 25%
Acute erythroderma is caused by drugs and is potentially fatal
Erythroderma has profound effects on the entire body. e.g.: poikilothermia, fluid and electrolyte imbalance, high output cardiac failure, increased basal metabolic rate, hypoproteinemia, anemia due to reduced levels of iron, folic acid and other vitamins, endocrine, hepatic and renal complications, effects on hair and nails.
Clinical clues about etiology:

Acute: drugs

Areas of sparing: PRP

Massive hyperkeratosis and deep fissures of palms/soles: Psoriasis, CTCL, PRP

Sparing of scalp hair: Psoriasis, Eczema

Variable erythema and scale thickness/brownish hue/large lymphnodes: CTCL
Massive scaling of scalp with hair loss: CTCL, PRP

Dusky Red: Psoriasis

Yellow/orange – red: PRP

Lichenification/erosions/excoriations: Eczema

Typical nail changes of psoriasis

Ectropion: CTCL, PRP
Management

Histopathology is not always helpful
History and physical examination for clues are important
Chest X ray, immunoelectrophoresis, CT scans/MRI and bone marrow aspiration
Lymphnode biopsy
Skin and blood bacterial cultures
- Treatment is supportive, including fluid electrolytes and albumin restoration, parenteral nutrition and temperature control.

- Be aware of signs of sepsis, renal and cardiac failure.

- Watch for deleterious adverse effects of prolonged glucocorticoid therapy.
**Topical:** Water baths, bland emollients ± topical steroids.

Beware of ↑ absorption of topically applied medications eg: salicylism, methaemoglobinemia.

Be cautious of irritant topicals eg: dithranol, tar

**Systemic:**
Oral glucocorticoids for remission induction but not for maintenance.

Specific Systemic therapy for the underlying condition.